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An Inaugural Dissertation on the Nature, Use, and Practical Application of Diaphoretics

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Inaugural Dissertation on the Nature, Use and Practical Application of Diaphoretics.

Section 1.
Of Diaphoretics.

By the term diaphoretics, I mean that class of remedies, which promote, or increase the natural discharge from the skin, whether it be, the sensible, or insensible perspiration.

It will be recollected, that it is not my object, to enter into a detail of any particular article of this class. I intend merely, to give a brief sketch, of the

nature, and use of the whole, as applied in the cure of diseases.

When properly made use of, diaphoretics are a class of articles, applicable to an extensive variety of diseases; several of which, I shall endeavour to point out, in the course of this essay.

Sweating is a mere increase, of a natural secretion from the skin. Hence it is evident, that perspiration may take place, in consequence of an invigorated action, of the cutaneous vessels, from stimulants being applied, either directly to them, or to the force of the circulation in general

Diaphoresis is often counteracted, by the existence of a constriction on the extreme vessels, and consequently an increased energy of the heart and

arteries, is not always, and necessarily followed by this process. To induce sweating under such circumstances, it is necessary to overcome this resistence, which is most effectually accomplished, by inducing a relaxation on the surface

When properly managed, diaphoretics all concur, in reducing arterial action, however diversified their modus operandi may be, — hence, they may be ranked, as one species of depletory remedies. By their direct evacuation from the skin, the force, of the heart, and arteries, is diminished, — by their determining to the extreme vessels, a portion of blood is driven from its ordinary route, and also, by their overcoming the constriction, on the extreme vessels, (in consequence of their proving an indirect stimulus, to the moving powers,) they are amply calculated

to diminish morbid action. By them also internal congestions are removed, in consequence of their centrifugal tendencies and very probably, they make on the capillaries, a very salutary, though not a very explicable impression.

Section 2.

On the administration of Diaphoretics.

As it would be highly improper, to have recourse to diaphoretics indiscriminately, or prescribe them under all circumstances, and conditions, it must be obvious, that their successful use depends upon certain practical precautions. The principal of which are the following: viz —

1st. When perspiration is desired, the patient should in every instance where it is practicable, be kept in bed, and his

pulse, and the temperature of his body, be carefully watched: If the former is vigorous, or the latter high, (should it not be particularly forbidden), bleeding ought to be premised. It is said, that sweating will not take place, when the heat of the surface is above one hundred and eight degrees. In a vigorous state of the circulation, it also rarely happens, and when it does it is partial only, and without any benefit; but on the contrary, injurious

If the stomach is not irritable, diluent drinks ought to accompany their exhibitions. This applies chiefly, to the emetic articles, as Specacuanha, and the antimonial preparations. The temperature of the surface ought to regulate that of the drink. Should the former be high, the latter must be proportionably cold, and vice versa.

Purging should be carefully avoided, while we pursue the diaphoretic plan, in the lower forms of disease, unlesp it should be indicated by particular circumstances, because, it is very apt to check diaphoresis, and aggravate the complaint, in this stage of the system, by changing the action from the bowels as well as exposing the patient to cold

The action of the cutaneous vessels, and that of the urinary organs, is in an inverse ratio. It is, therefore, proper, that when the one is intended to be excited, the other should be restrained. Accordingly during the operation of sweating, whatever increases the action of the kidnies, ought to be carefully avoided

In cases where a regular, and long continued perspiration is intended, a-

flannel shirt should be substituted, for a linen one; but this, in all cases, in which we practice sweating, is not necessary, and may even prove injurious, in some acute diseases, particularly in febrile affections, by causing too much irritation.

When the sweating process is over, the flannel, or linen, must be changed, for the filth, thus generated, may become very prejudicial, and even excite fever, by its irritating nature.

Section 3?

On the practical application of diaphoretics.

Having pointed out some of the most prominent rules, by which the application of diaphoretics is to be governed, I shall next proceed to enumerate some of the different diseases, in which their beneficial effects, are particularly experienced.

Than sweating, there is perhaps, not a more common, and popular plan of treating disease. — Diaphoretics are resorted to, by every kind of society: — not only the most vulgar, but also the more enlightened and polished class of mankind, seem alike, to be prejudiced in their favour. And why not? — Do we not find them ranked in the catalogue of remedies, which bountiful, and beneficent nature, points out to us? But while we are thus

favoured, with her kind, and parentine instructions, it becomes not less our duty, as faithful pupils, to study well her intentions, lest by our own indolence, we turn her balms into poison, and her cordials into venom.

It would be superfluous for me, to enter into any detail, in proof of this assertion — One simple illustration, will confirm it. Let us suppose ourselves at the bedside of a patient, sick with typhus fever, in its early, and inflammatory stage. We find his pulse quick, active, and chorded; his skin dry, and hot, with throbbing, and burning of his temples; his mind delirious; his tongue dry, and parched; his bowels constipated, and his thirst excessive? Knowing, that this disease (as well as many others) often comes to a favorable crisis, by

the occurrence of a diaphoresis (induced by either a salutary effort of nature, or the administration of some medicine, for that purpose) we resort immediately, to some powerful and stimulating diaphoretic, in the case before us. The effect will be, an increase of all the present symptoms, with the addition of others, still more alarming. Whereas, had the morbid excitement been first reduced by the more direct, and proper means; and then, the article properly chosen and directed, the result, in all probability, would have been very different — such as an open, and more regular pulse, moist skin, clean tongue, with secretions, and excretions more natural and healthy, and a consequent subsidence of the disease. It is therefore certain, that diaphoretics, like many other arti=

cles, notwithstanding their great efficacy, in the cure of disease may become the source of mischief and alarm, when improperly directed

In intermittent fever, diaphoretics, when properly directed, will not only tend to bring the paroxysm to a speedy issue, but also prevent its recurrence by their tonic effect on the capillaries. This double effect, however, is not to be expected, from the same article — while we give for the former the more cooling and relaxing, to produce the latter, the more opposite, and stimulating, are demanded

In remittent and continued fevers these remedies also become a very important article; after arterial action is sufficiently reduced, by the

more direct depletory measures, we must here, as well as in all other cases of the kind, remember the ever valuable precept, which teaches us, never to force perspiration, in any inflammatory disorder, but rather solicit it, by lenient, and gentle means. To our "autumnal bilious fevers," we are told by Professor Chapman, these observations are more particularly applicable. "It is well known", the Doctor observes "in many instances, how exceedingly protracted is their career:— and I have sometimes found, under such circumstances, diaphoresis, kept up, for twelve, or eighteen hours, very successfully to conduct them to a crisis, by breaking the wrong habits by which they are continued"

In yellow fever, as might be expected, diaphoretics have not been lost sight of. In New York, it appears they were carried to a considerable extent in the treatment of that dreadful malady; but unfortunately, as it would appear, from their record of mortality, they, in common with all other remedies, proved little succesful

To typhus fever, sweating is well adapted. — Diaphoretics here, become a valuable class of remedies, when directed with judgement; particularly the antimonials. In the milder, and more simple forms of this disease, we may resort to them, as soon, as the alimentary canal is sufficiently evacuated, and generally with decided advantage; but where the disease puts on a more violent, and inflammatory character, the exhibition

of diaphoretics must be governed by those general rules already mentioned.

Of the efficacy, of the antimonial diaphoretics, in the early stage, of the more simple forms of typhus, I can speak with some degree of confidence I had repeated opportunities during the course of last autumn, to observe their good effects, in these cases, as they accurred, in the practice of my worthy preceptor, Doctr. Wm. J. C. Baum. His treatment here was briefly this. When called at an early hour, an emetic, or cathartic was administered, after which the following prescription was made use of, viz: Tart. Emetic. gr. 1

Opium - gr. iv

Nit. of potash gr. xxiv

Mixed, and made into four powders, one of which was given, every three

or four hours. This was repeated, until the surface became sufficiently relaxed, the pulse more regular and open, and the tongue, clean, and moist, which was generally accomplished, in the course of five, or six days. Strict attention, of course, was paid, during this time, to the patient's bowels, which were kept in a soluble condition. Under this treatment, every case of the description alluded to, was speedily relieved; the number of which was by no means small, amounting probably to not less than fifty, or sixty.

The disease called Peripneumonia Typhoidea, or "Winter Epidemic" (which has of late years made its appearance, as such an extensive, and complicated pestilence throughout a great part of the United States) we are told by pro=

fessor Chapman, has been best treated by those, who adopted the diaphoretic plan, when it assumed its more simple form. Here as in genuine typhus, to which it bears considerable analogy, there were also not unfrequently, those great local congestions, (as in the bilious, pneumonic, and anginose cases) which called for more powerful evacuating agents, and demanded, as a primary step, the use of emetics, and cathartics, after which diaphoretics displayed decided advantage.

As regards the contagious, and eruptive complaints, — they perhaps all have a time, at which diaphoretics become a valuable part of their treatment.

In diseases of the alimentary canal, perhaps there is no remedy more valuable, than the one before us. Of

these dysentery is not the least remarkable. Richter, whose authority is so very respectable, considers this disease, as a rheumatic, or catarrhous affection, of the large intestines, and consequently, his leading treatment, is sweating. This practice is sanctioned, by Doctor Chapman. His (Dr. Chapman's) theory, I think, could not be more rational, on this subject, and with not a little propriety, he condems, the practice of continual purging, in some of these affections, upon the idea, that the matter formed, is the cause, and not the effect of the disorder. Believing the accumulation, of acrid matter, to be the result a ~~a~~ previous irritation, in the stomach and bowels, giving rise to an increased effusion, from the mucous follicles, or the exhalent vessels, and sometimes a very vitiated secretion of bile

his practice is, first, to evacuate the alimentary canal, moderately, after which, to allay the intestinal irritation, and bring on a relaxation of the surface, he gives combinations of Ipecacuanha, and opium, and if necessary, calomel is added.

The same may be said of Cholera infantum, commonly called "Summer Complaint," as well as, Cholera Morbus. Here also we have a specimen of intestinal irritation, complicated with no small degree of hepatic derangement.— This being the fact, it becomes no less obvious, that excessive purging becomes pernicious also, in these complaints; since it can only have the effect of keeping up ~~the~~ the morbid irritation already existing. We ought therefore, as Professor Chapman justly directs, resort to comparatively

sparing evacuations, and then endeavour to quiet irritation, restore healthy secretion, and lastly give healthy tone to the parts. Anodyne diaphoretics, (if I may be allowed the expression,) to which minute doses of calomel are added become the principal remedy therefore.

In chronic dysentery, and diarrhoea, which appear to be kept up, for want of a proper balance in the capillary system, diaphoretics are undoubtedly beneficial, for reasons sufficiently intelligible

In Peritoneal inflammation, after action is sufficiently reduced, by more direct depletion, diaphoretics become exceedingly useful. Nor are they less applicable when properly directed, to many of the pulmonary affections, rheumatism and a number of the other in

flammatory diseases; but as the same rules, that have been repeatedly mentioned with regard to their administration in other diseases of excitement, do equally apply here, I deem it unnecessary to repeat them again. I shall only add, that, when administered in the forming stage of catarrh, pneumonia, and asthma, diaphoretics are said to cut short the disease at once, without permitting it to make any further progress; but when delayed beyond this period, they cannot be again employed, before the excitement is sufficiently reduced, by other means

Dropsy is another form of disease, in which diaphoretics, are said to have of late been a good deal used, as well in this country as in Europe. This being a disease, in

which the capillaries are so much con=
cerned, it does not appear at all strange,
that when properly selected, the remedy
before us, should prove beneficial, in
some of these cases. Doctor Chapman
thinks, that dropsies, which have their
origin, in intermittent, and are com=
plicated, with visceral obstruction,
are among the cases, to which diaphore=
tics are most adapted